## **REMARKS**

Prior to examination, Applicants respectfully request entry of this Amendment in which the specification and abstract have been amended to correct minor informalities. Pursuant to 37 C.F.R. § 1.121(b)(1)(iii), a marked-up version showing the amendments thereto is attached. No new matter has been added.

Claims 48 - 94 are pending herein. Claims 1 - 47 have been cancelled in favor of new claims 48 - 94. No new matter has been added. Applicants believe the case is now in condition for examination.

If the Examiner believes that contact with applicants' attorney would be advantageous toward the disposition of this case, he is herein requested to call applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-6146.

Respectfully submitted,

August 1, 2002

Date

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SPB:jms

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## VERSION OF PARAGRAPH WITH MARKINGS TO SHOW CHANGES MADE

Page 29, line 21 – page 30, line 6:

Reflection angles at the specular reflector 10d may be appropriately determined based on the configuration of switches in accordance with the purposes. In addition to the reflection member to reflect light provided with an inclined surface having predetermined angle as shown in Figs. 1 (a), (b), and (c), the reflection member may include: for example, a plate optical path-changing member 10 arranged in a flat condition at an angle of 0° as shown in Fig. 9. Incidentally, the optical path shown by a broken line in Fig. 9 shows an optical path when the optical path-changing portion 98 is brought into contact with the light transmission portion 81.

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

Abstract of the Disclosure

An optical switch comprises includes: at least a light transmission portion, an optical path-changing portion, portion and an actuator portion and light transmission ehannels; saidportion. The light transmission portion having has a light reflecting plane provided on at least one part of a plane facing the optical path-changing portion to totally reflect light; said optical path changing portion beinglight, and light transmission channels having optical wave guiding bodies and being provided in at least three directions with the light reflecting plane as a starting point. The optical path-changing portion is provided in proximity to the light reflecting plane and having of the light transmission portion in a movable condition and has an optical path-changing member for at least reflecting or scattering light; said light. The actuator portion having a mechanism being displaced and transmitting has a mechanism that is displaced by external signals and transmits the displacement to the optical path changing portion; and saidlight transmission channels having optical wave guiding bodies and being provided inthree directions with the light reflecting plane as a starting point. Switching or dividing of an optical path is conducted by contacting or separating the optical path-changing portion to or from the light reflecting planeby displacement of the actuator portion path-changing portion. The switching or dividing of an optical path is carried out by contacting or separating the optical path-changing portion to or from the light reflecting plane of the light transmission portion by displacement of the actuator portion in response to the external signals. An input light from the light transmission channels is totally reflected at the light reflecting plane of the light transmission portion, and it is transmitted to a specific light transmission channel on an output side when the optical path-changing portion is separated from the light reflecting plane of the light transmission portion. Or an input light is taken from the light transmission channel, is reflected or scattered at the optical path-changing portion, and it is transmitted to a specific one or more light

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

transmission channel(s) on the output side when the optical path-changing portion is contacted to the light reflecting plane of the light transmission portion. This optical switch allows low power consumption, makes possible high-speed response, size reduction and high integration, significant reduction of signal attenuation and, furthermore, switching per specific input light.